U.S.C. §103(a) for obviousness over Cook in view of Landsman; Claims 1-3, 10 and 12 were rejected under 35 U.S.C. §103(a) for obviousness over Cook in view of Tatah '462; Claims 5, 6, 9 and 10 were rejected under 35 U.S.C. §102(b) for anticipation by Hase et al.; and Claims 8, 9 and 11 were rejected under 35 U.S.C. §102(b) for anticipation by Cook.

Initially, the Examiner is thanked for making the applicants' Form 1H49 of record and for calling to the applicants' attention that Japanese Patent Publication No. 06-061193 was submitted instead of Japanese Patent Publication No. 60-061193. Therefore, in order to provide the Examiner with the proper reference, an Information Disclosure Statement accompanies this Amendment.

Concerning the rejection of Claims 1-12 under 35 U.S.C. §112, second paragraph, for indefiniteness, Claims 1-7 have been amended, Claim 8 has been canceled, and Claims 9, 10 and 12 have been amended to remove the indefinite language pointed out by the Examiner. Therefore, careful reconsideration and withdrawal of the rejection of remaining Claims 1-7, 9, 10 and 12 under 35 U.S.C. §112, second paragraph, for indefiniteness are respectfully requested.

Concerning the objection to Claim 13-15 under 37 C.F.R. §1.75(c), Claims 13-15 have been amended to place them into proper multiply dependent form. Therefore, withdrawal of the objection to Claims 13-15 under 37 C.F.R. §1.75(c) is respectfully requested.

In regard to the rejection of Claims 1-6 and 8-12 on various grounds under 35 U.S.C. §102(b) for anticipation and under 35 U.S.C. §103(a) for obviousness, the applicants hereby cancel Claim 8. Since dependent Claim 7 has not been rejected on its merits, it appears to the applicants' attorneys that Claim 7 is now allowable over the prior art references of record.

Independent Claims 1 and 5, as now amended, both recite a method for marking materials using a marking material and a material to be marked consisting of a light transparent body or a laser transmittive body.

In Claim 1, the method is recited as comprising a first process of placing a surface of the material to be marked and a surface of the marking material together with a desired gap therebetween.

In Claim 5, the method comprises a process of forming patterns of characters, diagrams or symbols on the material to be marked by placing a surface of the material to be marked and a surface of the marking material together with a desired gap therebetween.

Independent Claim 1 has been amended to recite a second process of removing or denaturalizing a part of the deposit placed onto the surface of the material to be marked by irradiating with a laser beam of a second laser power while scanning with the laser beam.

U.S. Patent No. 5,935,462 of Tatah teaches that the whole substrate can be irradiated by repeated reflection of laser light in the post-treatment process. Although the laser beam is irradiated in order to bind a deposit on the substrate in the post-treatment process of Tatah, the laser beam of the present invention is irradiated instead to form patterns of characters, diagrams or symbols in this second process.

Independent Claim 5 recites a method comprising the steps of: forming patterns of characters, diagrams or symbols; vaporizing the marking material by irradiating through the material to be marked with a laser beam while scanning with the laser beam; and placing a deposit vaporized from the marking material onto a predetermined portion of the material to be marked.

The U.S. Patent of Hase et al. discloses a substrate having a laser absorbing film so that the substrate is heated by the laser beam while it is being transmitted through the substrate. Thus, the process of Hase et al. is quite different from the method for marking materials set forth in Claim 5.

Since none of the cited prior art references either identically disclose or obviously suggest the recited features of the present invention discussed above, it necessarily follows that amended independent Claims 1 and 5 now patentably define the present invention over the cited prior art references. Remaining dependent Claims 2-4, 6, 7 and 9-15, as well as new dependent Claims 16-25, are therefore patentably distinguishable over the applied references.

Finally, concerning the objection made in the Notice of Draftsperson's Patent Drawing Review, the applicants' attorneys have prepared and filed herewith a Letter Requesting Approval of Drawing Corrections in order to label separately all views. However, the Draftsperson's objection to Figs. 17(a) and 17(b) is hereby traversed because the two views are already separately labeled. Therefore, approval of the accompanying drawing corrections and withdrawal of the objection to Figs. 17(a) and 17(b) are earnestly solicited.

Consequently, in view of the foregoing amendments and remarks, no further issues are believed to be outstanding and the present application should be considered in clear condition for formal allowance. Therefore, a quick and favorable action to that effect is respectfully requested.

Respectfully submitted,

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IN THE CLAIMS

1. (Amended) A method for marking materials using a marking material [to be marked] and a [marking] material to be marked consisting of a light transparent body or a laser transmittive body, comprising[;]:

a first process of placing [the] a surface of said material to be marked and [the] a surface of said marking material together with a desired gap therebetween, vaporizing said marking material by irradiating [it] through said material to be marked with a laser beam of a first laser power while scanning with the laser beam, and depositing a deposit vaporized from said marking material onto [to] a predetermined portion of said material to be marked; and

a second process of removing or denaturalizing a part of said deposit deposited onto [to] the surface of said material to be marked by irradiating with a laser beam of a second laser power while scanning with the laser beam;

[whereby] wherein patterns of characters, diagrams or symbols are formed on said material to be marked.

2. (Amended) [The] A method for marking materials according to claim 1, wherein [the] laser power of [said] the first laser power is greater per unit area than [the] laser power of [said] the second laser power.

3. (Amended) [The] A method for marking materials according to claim 1, wherein [said] the deposit is subject to direct irradiation in [said] the second process without passing [said] the laser beam through [said] the materials to be marked.

4. (Amended) [The] A method for marking materials according to claim 1, wherein the deposit caused to degenerate by irradiation by said second laser power is changed in color [or to made transparent] by heating.

5. (Amended) A method for marking materials, in which [the] marking material [to be marked] and [the marking material] materials to be marked consist of a light transparent body or a laser transmittive body, said method comprising the [process] steps of:

forming patterns of characters, diagrams or symbols on said material to be marked by placing [the] a surface of said material to be marked and [the] a surface of said marking material together with a desired gap therebetween;

vaporizing said marking material by irradiating [it] through said material to be marked with a laser beam while scanning with the laser beam; and

depositing a deposit vaporized from said marking material onto [to] a predetermined portion of the material to be marked;

[whereby] wherein said patterns of characters, diagrams or symbols are formed by reacting [the] gas existing in said desired gap with the vaporized marking material due to [the] evaporation of said marking material by said laser beam and [the] a reaction product deposited onto [to] the [desired] predetermined portion of the material to be marked.

6. (Amended) [The] A method [of] for marking materials according to claim 5, wherein the gas existing in said desired gap is one of [either] oxygen, [or] nitrogen or both.

7. (Amended) [The] A method for marking materials according to either claim 1 or [claim] 5, wherein said gap is between 2 $\mu$m [or more] and [less than] 200 $\mu$m.

8. (Cancel).

9. (Amended) A marking material for use in [any one of claims] either claim 1[,] or 5 [and 8], wherein the marking material used is a metal or a compound, [an] alloy[, an] or intermetallic thereof [or metal compound, or a compound containing at least one of said metal, alloy and intermetallic or metal compound].

10. (Amended) [The] A marking material of claim 9, wherein [the] a thin film formed on [the] a surface of the light transparent body or the laser transmittive body is of a thickness of 10 $\mu$m or less [and preferably from 0.1 $\mu$m to 2 $\mu$m].

12. (Amended) A marking material for use in either claim 1 or 5, wherein the marking material is either a martensite or a ferrite stainless steel, or a [low] carbon steel, [and preferably] or a steel with a carbon content of 0.25% or less.

13. (Amended) [The] A marking material according to claim 11 [or 12], wherein the marking material is a thin film formed on [the] a surface of [a] the light transparent body or the laser transmittive body.

14. (Amended) [The] A marking material according to claim 13, wherein a thickness of said thin film is 10 $\mu$m or less[, and preferably from 0.1 $\mu$m to 2.0 $\mu$m].

15. (Amended) [The] A marking material according to [any one of claims] claim 9 [to 14], wherein the pattern formed is QR Code, Data Code, Veri Code, a two-dimensional code, or a bar code.

16. (New)

17. (New)

18. (New)

19. (New)

20. (New)

21. (New)

22. (New)

23. (New)

24. (New)

25. (New)